

REMARKS

Reconsideration of this application is respectfully requested. To this end, petition is hereby made for a two-month extension of time to respond to the outstanding Office Action of January 8, 2008.

Claims 1-14 are pending in the application. Upon entry of this Amendment, claims 1, 7 and 11 will be amended.

The Examiner is thanked for indicating in the outstanding Office Action that objected-to claims 7-10 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 7 has now been amended to include all of the limitations of its base claims 1, 2, 5 and 6. Accordingly, claims 7-10 should now be in condition for allowance and the Examiner's objection to such claims should now be withdrawn.

In the outstanding Office Action, the Examiner further rejected claim 11 under 35 U.S.C. §112, second paragraph, as being indefinite, contending that there is insufficient antecedent basis for the limitation "the cradle" in line 3 of claim 11. Claim 11 has now been amended to change "the cradle" to -- a cradle --. As such, the Examiner's rejection of claim 11 under §112, second paragraph, should now be withdrawn.

The Examiner has also rejected claims 1-2 and 12-14 under 35 U.S.C. §102(b) as being anticipated by Peritt (USP 4,168,049) and claims 1, 2, 5 and 6, also under §102(b), as being anticipated by Enlund *et al.* (3,606,218). The Examiner further rejected as being

unpatentable under 35 U.S.C. §103(c), claim 3 over Peritt or Enlund, claim 4 over Peritt in view of Thomas (USP 4,125,052), and claim 11 over Peritt in view of Franchino *et al.* (USP 5,703,318). The Examiner's rejections are respectfully traversed.

Claim 1 of the present application, as amended, is not anticipated by Peritt (USP 4,168,049). Amended claim 1 describes a gun tube support assembly in which the gun tube slides when a projectile is fired through the gun tube. The gun tube support assembly is described as being comprised of a plurality of support sections arranged annularly around the gun tube. Each support assembly includes a bush housing, a cradle bush for the bush housing for receiving and supporting the gun tube; and a damping means sandwiched between the bush housing and cradle bush, for absorbing and damping kinetic energy emanating from the gun tube during the firing of a projectile through the gun tube. Claim 1 has been amended to clarify that the gun tube slides within the gun tube support assembly on the cradle bush when a projectile is fired through the gun tube.

The segmented gun tube support assembly described in claim 1 as being comprised of a plurality of support sections arranged annularly around the gun tube is not disclosed in Peritt. Peritt discloses a rigid mount for an internally pressurizable plastic tube, such as a glass reinforced plastic (GRP) gun tube, which does not restrict radial expansion of the tube due to internal pressure, such as during use of the tube to launch a projectile. The mount 20 is shown in Figures 3 to 5 of Peritt. The Examiner specifically references Figure 4 of Peritt in his rejection of claim 1 as being anticipated by Peritt.

The mount 20 shown in Figures 3 to 5 is attached to an expansible body of glass reinforced plastic or tube 22. A plurality of splines or key ways 24 are bonded or integrally formed about the periphery of tube 22 and provide a foundation for a series of trapezoidal wedges 26 having keys which fit within key ways 24. An annulus or ring 32 is concentrically disposed about tube 22 and is provided with a plurality of open-ended chambers 30 for an equal number of reciprocal pistons 28. The pistons 28 lie along radii of the tube 22 and are biased radially inwards by springs 34 which are placed within chambers 30. These springs 34 may be Belleville or coil springs and are held in place on top of pistons 28 by means of threaded plugs 36 which close off the open ends of the chambers 30. In operation, when the tube 22 expands under internal pressure, which may be due to the launching of a projectile or rocket, wedges 26 and pistons 28 are forced radially outward and compress springs 34. When the pressure in the tube is released, springs 34 return pistons 28 to their original position.

The "bush housing", which the Examiner contends is disclosed in Peritt, is described by the Examiner as being formed from "a combination of elements 32 and 36", *i.e.*, the annulus or ring 32 concentrically disposed about tube 22 and the plurality of threaded plugs 36 which close off the open ends of the plurality of chambers 30 in ring 32. Clearly, ring 32 in Peritt is a unitary ring and not segmented as in claim 1 in that it is not comprised of a plurality of support sections arranged annularly around a gun tube.

In addition, the “cradle bush”, which the Examiner contends is disclosed in Peritt, is described by the Examiner as being formed from “a combination of elements 26 and 28” *i.e.*, the series of trapezoidal wedges 26 and the plurality of reciprocal pistons 28 in the equal number of open-ended chambers 30. Clearly, however, the trapezoidal wedges 26 and reciprocal pistons 28 shown in Peritt are not the cradle bush recited in claim 1. For one thing, the cradle bush is that part of the claimed gun tube support assembly on which the gun tube slides when a projectile is fired through the gun tube. In contrast, in Peritt the barrel is fixed in the mount 20 and can only widen radially. It is fixed in the axial direction. Peritt specifically states at column 1, lines 7 to 10, that his invention relates to “a rigid mount for a plastic tube which does not restrict radial expansion of the tube due to internal pressure.”

In the present invention, the gun tube slides in the annular support assembly when a projectile is fired through the gun tube. It is not constrained from doing so by the annular support assembly. This is not possible with the plastic tube disclose in Peritt, since his invention relates to a rigid mount, which is attached and bonded to the tube. *See, e.g.*, Peritt, column 3, lines 28 to 31. In Perit, the mount 20 attempts to restrict and limit radial movement and/or expansion of the tube. The gun tube support assembly described in claim 1 does not. It merely supports the gun tube so that the gun tube can move relative to it during firing. Thus, the purpose of the gun tube support assembly described in claim 1 is different from the rigid mount 20 disclosed in Peritt.

Because Peritt does not anticipate independent claim 1, it also does not anticipate claims 2 and 12 to 14, which depend from claim 1.

With regard to the Examiner's contention that claims 1, 2, 5 and 6 of the present application are anticipated by Enlund *et al.* (USP 3,606,218), such claims are not anticipated by Enlund because Enlund discloses a pipe hanger that provides sound and vibration. In contrast, independent claim 1 describes a gun tube support assembly in which the gun tube slides when a projectile is fired through the gun tube.

Enlund discloses a pipe hanger 11 consisting of a metal support strap portion 12 and a mating strap portion 13 which, when joined together, form a sleeve for receiving a pipe 14. The strap portions 12 and 13 are joined by bolts 15 extending through mating flanges 16. There is also a shank 17 extending from the lower strap that connects the pipe hanger 11 to a remote supporting member. To reduce resilience and further reduce transmission of vibration, a plurality of strips 19 of resilient material are cemented or otherwise fastened to the inner surface of the strap portions 12 and 13. Thereafter, the strap portions 12 and 13 and the strips of resilient material 19 are coated with a layer 18 of elastomeric material.

Claim 1 states that the gun tube support assembly is comprised of a plurality of support sections arranged annularly around the gun tube. Enlund does not disclose a plurality of support sections arranged annularly around a gun tube. The Examiner argues that Enlund includes a plurality of support sections, each including a bush housing (elements 13 and 12) and a cradle for the bush housing capable of receiving and

supporting a gun tube, asserted by the Examiner to be element 18. As shown in the only figure of Enlund, and as discussed in his specification, elements 12 and 13 in Enlund are the strap portions 12 and 13 that form a sleeve around a pipe 14. Enlund col. 2, lns. 11-15. Pipe 14 is not a gun tube, as recited in claim 1. Claim 1 also states that each of the plurality of support sections includes, *inter alia*, a cradle bush for receiving and supporting the gun tube and on which the gun tube slides within the gun tube support assembly when a projectile is fired through the gun tube. Here again, as noted above, Enlund does not disclose a gun tube, much less a cradle bush that receives and support a gun tube and on which a gun tube slides when a projectile is fired through the gun tube. Enlund is concerned with supporting a pipe, and there is no discussion in Enlund of the pipe moving within the pipe hanger 11 disclosed in Enlund. The element 18 disclosed in Enlund, *i.e.*, the layer of elastomeric material used to coat strap portions 12 and 14 and strips 19 of resilient material, is not a structural component that receives and supports a gun tube, like the cradle bush recited in claim 1. Thus, clearly, Enlund does not anticipate independent claim 1 of the present application. And, because claim 1 is not anticipated by Enlund, dependent claims 2, 5 and 6, which depend from claim 1, are also not anticipated by Enlund.

With regard to the Examiner's rejections under §103(a) of claim 3 over Peritt or Enlund, claim 4 over Peritt in view of Thomas (USP 4,125,052) and claim 11 over Peritt in view of Franchino *et al.* (USP 5,703,318), given the deficiencies in the teachings of Peritt and Enlund discussed above, even if the Examiner properly combined the cited

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patents as set forth in the outstanding Office Action, the result would still not be the claimed invention. As such, claims 3, 4 and 11 are not obvious under §103(a) over the references cited in the outstanding Office Action.

In view of the foregoing, it is believed that all of the claims pending in the application, *i.e.*, claims 1-14, are now in condition for allowance, which action is earnestly solicited. If any issues remain in this application, the Examiner is urged to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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